PARSEL

PARTNERSHIP IN CONSERVATION AND DEVELOPMENT

The European Union's project "Public-Private-Community Partnerships to improve food security and livelihoods in the South East Lowveld and Mid Zambezi Valley (PARSEL - Food/2007/137-950)"

Strategies to improve the livestock farming system in Chiredzi, South East Lowveld of Zimbabwe

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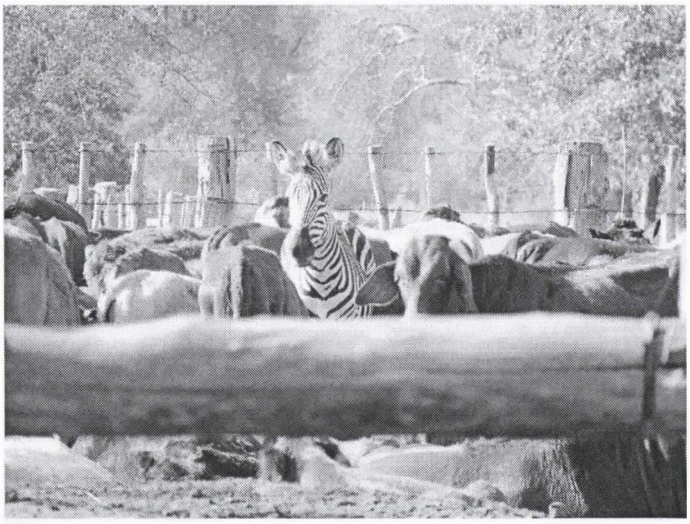
CIRAD

20-30 November 2008



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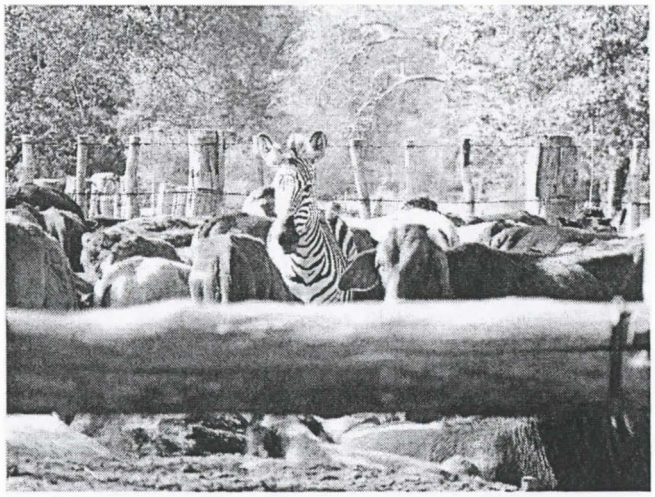

Executive Summary

In the current context of hyperinflation and economical failure in Zimbabwe, the cattle represent a refuge value for the main stakeholders. The main consequence is an important stocking of cattle (high increase of the cattle population) and an over-destocking of small ruminants and other species (to be validated). In order to improve the efficiency of livestock farming system in Lowveld, it is proposed to include 3 aspects (health protection, market access and feeding strategy) with 5 types of actions: (1) Surveys for improving the knowledge about demographic parameters, feeding strategy and livestock commodity channel; (2) Equipment and rehabilitation of livestock infrastructure as dipping tank, irrigation scheme, water sources, cattle market; (3) Farmers' organization in order to propose sustainable system for veterinary drugs providing; (4) Training of farmers on poultry, goat and dairy production including diffusion of risk factors manual for kid mortality; (5) Introduction of new technologies as forage cultivation in irrigated areas, inventory of by-products and small stock farming. Thos proposals were discussed with the thematic working group.

Introduction

The PARSEL project supported by European Union aims to achieve the conditions for a harmonious cohabitation between the stakeholders managing the wildlife and the small-holders farmers using agricultural spaces and livestock at the park surroundings. The current mission was included in the Thematic working group (TWG) 3 « health and animal production » and more precisely in the component 3 entitled « availability of wild meat protein and improved livestock production developed ». The objectives of this component were described in the project document as follows: « *the depressed economic climate has stalled this process and the radical change in the production of livestock from commercial to small-scale farmers introduces yet new challenges. For example, the interface between wildlife and livestock presents the opportunity for pathogens to cross the species barrier. The links between these production systems and marketing opportunities have changed radically and the current economic situation in Zimbabwe encourages small scale farmers to keep on investing in large herds instead of regular destocking. The free movement of wildlife means cattle can get infected by wildlife pathogens and visa versa. Managing health issues at the interface between wildlife and cattle is a key step for the development of communities living in the GLTFCA land-use matrix, and for their acceptance of a shared ecosystem with wildlife and for the conservation of biodiversity* ».

A short background of the project and of the previous proposal for livestock sector development is reported in annexe 3.

Methodology

The following steps were applied:

- Step 1: Study of background documents in Montpellier and at the beginning of the trip at Harare. The list of consulted documents was reported in references item. The documents included general overview of livestock sector development at national level and former reports on the EU-PARSEL project actions.

- Step 2: Initial briefing with the Project Manager, FAO and Department of Veterinary Services in Harare. These informations gave general enlightening to the livestock economy and challenges at the national and regional level. A meeting with Rob Cunliffe, sociologist having worked with small scale communities on their needs was also achieved.

- Step 3: Working session with the Coordination unit & Local experts in Chiredzi (Livestock working group). Several meetings were organized with local authorities (Mr Abraham Sitolé, chairman of the Chiredzi rural district council, A. Ndebele and Caiphas Chudu, all member of this council), field officer (Mike Watuwa), AGRITEX officer (Mr. Porpushaï), animal production officer (Siziba Stanslas) and veterinary service officer (Dr J. Makwangudze).

- Step 4: Field visits of some targeted Wards. The field visits included irrigation scheme and dipping tanks infrastructures, then cattle and sheep farms.

- Step 5: Working sessions with South East Lowveld private sector and government bodies (Agritex, Tongaat, RDC) involved in livestock production.

- Step 6: Debriefing workshop in Chiredzi with the Livestock working group. First draft proposal collectively discussed and sharing of the global diagnosis.

- Step 6: Report to the EU-PARSEL manager

Results

The importance of livestock in the Lowveld area is enlightened first by the cattle and small ruminants' population in Chiredzi district in September 2008 (table 1) in communal, small scale commercial farms and resettlements.

Area	Owners	Cattle	Goat	Sheep	Pig	Poultry	Donkey
Communal	8840	85237	67156	7085	2739	16602	4999
Sc commercial	14	1012	504	118	-	1670	39
Resettlements	549	7573	3559	2793	56	-	275
New resettlements	5025	56655	30027	2393	311	-	2812
TOTAL	**14028**	**150477**	**101336**	**12389**	**3106**	**18272**	**8115**

(*Source: Chiredzi veterinary office*)

Table 1. Livestock population in different sectors of Chiredzi district

So, on average, the herd composition per owner is reported in table 2.

Area	Cattle	Goat	Sheep	Pig	Poultry	Donkey
Communal	9.6	7.6	0.8	0.3	0.2	0.6
Sc commercial	72.3	36	8.4	0	119	2.8
Resettlements	13.7	6.2	5.1	0.1	0	0.5
New resettlements	11.3	6.0	0.5	0.1	0	0.6
TOTAL	**10.7**	**7.2**	**0.8**	**0.2**	**1.3**	**0.6**

Table 2. Mean herd composition in different sectors of Chiredzi district

On average, a herd in Chiredzi district included 10 cattle, 7 goats, 1 sheep and poultry. Half of the farmers have a donkey and 20% only a pig (fig. 2). Poultry are mainly present in commercial farms. Except in commercial farms, the herd composition is similar over all the livestock sectors. Approximatively, 10 ha are available for one cattle. The total Tropical Livestock Unit[1] in Chiredzi district is around 200,000 TLU approximatively, i.e, 8.5 ha/TLU at the district level or 6.4 ha/TLU if only rural lands are involved (67% of the district superficie). However a high difference is observed between sectors: 4.7 ha/TLU in communal lands, 8.3 ha/TLU in settlements and 26.4 ha/TLU in small scale commercial sector.

[1] Base for calculation : cattle = 1 TLU ; sheep and goat = 0.15 TLU ; donkey = 0.50 TLU

According to the RUAT report, the main problems listed by the farmers are the followings:

Problems	Wad number			
	Gudo	3 and 4	22	others
Theft	1	6	3	8
Shortage of bulls	2			
Drought/poor rainfall	3	1	2	7
Losses to diseases	4	4	4	6
Shortage of medications (vaccines)	5			
Contagious abortion	6			
Lack of grass		2		
Grazing areas far away		3		
Long distances to water sources		5		5
Cattle are being stolen to Mozambique				
Hard to get money to buy drugs		7		
Hard to get initial stock		8		
Losses to predators		9	1	1
Ticks			5	
Losses due to cold and wet conditions			6	
Losses to snaring			7	
Losses due to floods			8	
Some animals are ritually sacred			9	
Losses to poisonous plants			10	
Forced sales for funerals				2
Forced sales due to HIV/AIDS				3
Shortage of dipping chemicals				4

Those listed problems expressed by the farmers themselves could be summarized into 3 main aspects to be analyzed: (1) the veterinary aspects, (2) the market aspects and (3) the feeding aspects.

(1) Veterinary aspects

The main points where veterinary services could be provided are the **dipping tanks network**. All the cattle are gathered at those points at least one's a month. That is very important for vet services for:

- organizing vaccination (FMD, rabies, Anthrax)
- control tick born diseases
- checking sick animal
- achieving eventually epidemiological survey

The negative point is that the regular mixing of thousand animals in the same place could be favorable for diseases exchange. Nevertheless, the demand expressed by the farmers (extract from RUAT report) was:

- Rehabilitation of dips in several places necessary (structural innovation)
- Water supplies in areas far away from river

- Provision of chemicals and in general, to find a sustainable system to provide chemicals after the end of the project

The following dip tanks with the number of cattle involved were identified as follow:

Location	Dip Tank	No of cattle	No of owners
Ward 1 – Gudo	Gudo	2126	317
	Old Gudo	Not operational	
Ward 2 – St Josephs	St Josephs	1506	210
	Dendere	2367	184
Ward 25 – Muteyo	Muteyo	2911	264
Ward 3 – Masakesa	Tshovani	1948	243
Ward 4 – Rupangwana	Rupangwana	2214	185
	Mupinga	2387	215
Ward 22 – Chizvirizvi	Gora	1126	107
	Chibveve	1600	150
	Goto	2094	175
	Chizvirizvi	1442	138
Ward 23 – Nyangambe	Nyangambe		
	Perevere		
	Mashiri		
	Ngwana		
Ward 21 – Mkwasine	Estate dip	Not applicable	

(*source: provisory RUAT report*)

A system to assume sustainability of dipping tank management must be supported. Current farmers' organization for managing those infrastructures must be encouraged.

More generally, the main problem of the livestock sector is the access of small farmers to veterinary drugs and inputs. Some veterinary pharmacy can be implemented through the animal health center (good network available) and dipping tanks, but the main constraint is the drug providing at state level (antibiotic, deworming mainly). Private providers must be encouraged for assuming drug maintenance for other diseases than the main collective prophylaxis.

Elsewhere, the animal performances at herd level are not very well documented. The necessary data are not collected. In order to assess the impact of the project, a survey with assessment of the main performance rates as mortality, fecundity, birth, abortion, etc... would be of high interest. The evaluation of those performance rates must be achieved at the beginning and at the end of the project by using current software (see in the package LASER proposed by CIRAD, the module 12-Mo, "a retrospective methodology for estimating demographic parameters in tropical ruminant livestock population" by Lesnoff et al., 2007). This module could be proposed in order to assess the situation of animal performances at the beginning of the project, then at the end, for a better understanding of the trends in animal production.

(2) Market improvement

It is the main aspect and the less considered within the project. Indeed, in the context of hyperinflation, the risk is to consider cattle as a refuge for all the stakeholders. In that case, the regular destocking is decreased and the market of live cattle (the other species as goat and sheep are mainly involved in self-consumption) became very weak.

According to RUAT report, previously there were two markets:

- Muteyo – serving Wards 1, 2, 25, 3, 4, 5 and 22
- Nyangambe – serving Ward 23

These cattle markets worked well in their time. Currently the cattle market is competing with Mozambiquans cattle middlemen and local butcheries, but, in fact, the current meat channel is not known. The importance of the cattle flow is not quantified although around 25000 heads are expected to be sold in the Lowveld area each year.

In the RUAT report, it is suggested to rehabilitate these markets, but also look at the possibility of establishing a third market at Mupinga, such that the following areas would be served:

- Muteyo – Wards 1, 2, 25, 3 and 22 (part)
- Mupinga – Wards 4, 5 and 22 (part)
- Nyangambe – Ward 23

We totally agree with this proposal. There is also a need to consider water supplies, centrality of the location, and potential impact in terms of stimulus for business, availability of land, access, distance to business centers etc. But those markets will only be viable if sales can take place using foreign currency.

The absence of clear cattle market leads to consider sale as only opportunistic event but no commercial purpose. According to the RUAT report, the following reasons for sale cattle are revealed:

Factors leading to livestock sales	**1**	**3 and 4**	**22**	**23**
Food/hunger/drought relief/groceries	1	1	7	1
Funeral services	2		3	
Health expenses/illness	3	2		7
Business	4			
Payment of lobola	5	4	6	6
School expenses	6	5	1	3
Buying clothes for the family	7	12	4	8
Building houses	8	9		5
Piecework/weeding	9		10	
Tithing	10			
To pay fines for crimes/offenses re traditional laws		3	5	9
Paying of debts		6		
Buying farm equipment		7	2	
Buying farm inputs, seeds		8	2	2

Buying other livestock		9		
Paying for grinding meal		10		
In order to travel		11		
For drinking beer		12		
Animals that are not productive			9	
Buying household items			11	
Payment of livestock levies				4

(*source: provisory RUAT report*)

The procedures for selling cattle differed if it is cattle (regulated) or other livestock (not regulated). The selling needs to consult first with the veterinary department, the police, village head, and to have a stock card (issued by the veterinary department).

If an individual decides to kill an animal he should also consult with the police. For cattle a stock card is needed (from the veterinary officer) and a permit must be obtained from the police. The police must also be present when the animals are exchanged. As the cattle markets at Muteyo and at Nyangambe are no longer operating, these procedures are not really respected. Some sales now occur at dip tanks, others at individual homes.

The system has been changed, such that butchery owners (or their representatives) go to homes to buy beasts. Individuals who buy for their personal purposes do their transactions at a personal level, without the police, but with the consent of the veterinary officer or dip tank attendant. Major buyers have now emerged, such as butchery owners, millers and farmers with irrigation plots. They use barter trade, providing wheat, maize or maize meal in exchange for cattle, goats or sheep.

Buyers of livestock (from RUAT report)

Purchasers	Relative frequency
Mozambiquans	100
Buying at markets or dip tanks (Naude)	80
Butchers	50
Local people	25
Hippo Valley	5
Gonarezhou NP (rations for workers)	5
Chiredzi Wildlife Investments (for crocodiles)	5
CSC	1

(*source: provisory RUAT report*)

So, the main proposal would be a commodity channel analysis in order to estimate the new organization (formal and informal) of the sector, to quantify the flow (in and out Chiredzi district, between the different stakeholders within the district).

(3) Feeding aspects

Generally, the cattle seemed to be in good conditions (assessment of the body condition score) although we made the observation at the end of the dry season. However, according to the previous observations (RUAT report), some complains are

reported on "lack of grass" or "grazing area far away". The feeding constraints will be acute in communal areas where the land pressure is higher. It would be necessary:

- To make the inventory of useful by-products and of the feeding strategy of the farmer
- To manage the "mopane tree" for animal feeding
- To develop feedstuff production in irrigation scheme in order to develop a milk sector
- To assess the impact of watering and different feeding strategy on the grazing land
- To know the feeding system traditionally used bay the farmers from different areas

Discussion

The new rural economy context

In the recent past, the rural livestock economy was dominated by a few suppliers from the large-scale ranchers, going through slaughterhouses or the cold storage company, and mainly oriented to export. After land reform programme, a huge range of sources supply meat and many new stakeholders are involved. The collapse of export market due to foot-and-mouth outbreaks has led to a focus on local sales and market connections (officially). There have been significant supply constraints, as new farmers build up their herds and avoid selling –beef is no longer sold through in-town supermarkets, but through small butcheries and pole slaughter outlets in the rural areas and townships.

At term, theses newly supply chains could be an opportunity to link the resettlement areas with feedlots and butcheries in different patterns of ownership and management than formerly. This means that new players are participating in the rural economy, and benefits are being to be more widely distributed. Economic activity has thus relocated, linking local supply and demand, as well as new trading links. However, the hyperinflation pressure has a strong immediate negative effect on the rural economy in general and livestock economy in particular. Indeed, in this economical context, the cattle could be represented a "refuge" (it is better to have capital into cattle than in bank) and the marketing is limited to opportunistic needing sales as the market is not incentive, except under illegal exportation from.

The animal production in the lowveld

The Lowveld is characterized by environment with long dry season, typically adapted to extensive livestock farming system, but with crop activities in a climatic risk conditions. Indeed, the coefficient of annual variability is more than 45%, especially in the recent decennial which is a high constraint for agricultural productivity. In this context, cattle farming are the main source of maintenance and sustainability of the
farming system. At the province level, the cattle population is around 800.000 heads but the population is probably increasing. At Chiredzi district level, cattle population is assessed to be 150,000 in September 2008 *vs* 140,000 en October 2007. In general, the livestock population seems decrease for all other species (figure 1).

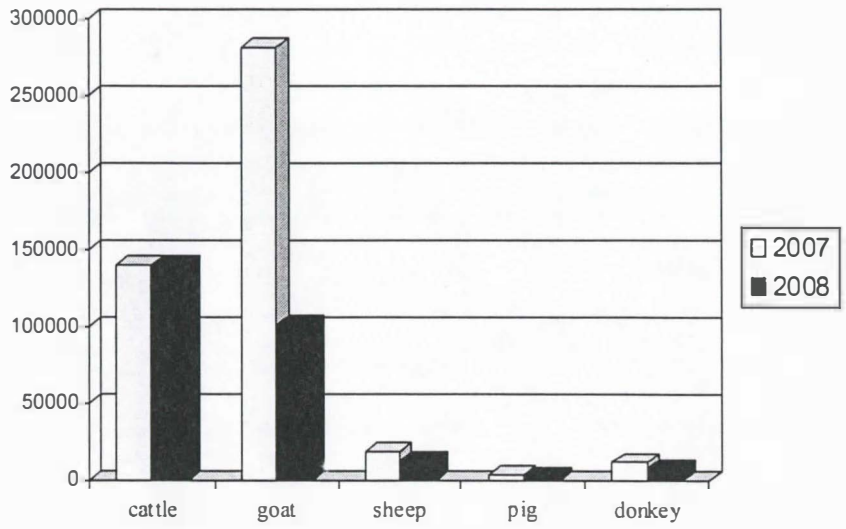

Figure 1. Change in livestock population 2007-2008

The main domestic animal population is cattle, secondary goat and sheep. Poultry and pig production are quite marginal and essentially for subsistence purpose. However, poultry population (and Guinea fowl) could be increased in order to satisfy daily consumption of the families and to participate to the tick regulation around the cattle housing. However, this production is highly dependant of the Newcastle disease vaccination. The climatic constraints are not favourable to exotic breeds and the local zebu and Sanga cattle breeds (Shona, Nkone, Tuli) are mainly present. Some breeds of Indian origin are also locally used (Brahman, red Sindhi and crossbred). The goats play an important role for securing the livestock system as there are used for daily expenses, and they are probably better adapted to the climatic context with more severe drought since the recent years. But the drastic change in goat population between 2007 and 2008 (which must be really validated because statistics on small stock are not reliable as no vaccination is available on those species) confirms that the main "refuge value" in hyperinflation context is still the cattle. At reverse, goat and sheep submit an over off-take for daily expenses, sometimes with no money exchanges, but with goods exchange (sugar for goat for example).

The crop-livestock systems are dominating in the area of the project, but they are very fragile systems. The maize cultivation, principal crop resource of the farmer, is at the limit of viability, and the livestock sub-system is not based on the mobility to compensate seasonal feeding deficit. As the main feedstuff storage can be available in the protected areas (conservancies and wildlife parks), the illegal introduction of cattle into these reserves are common and source of conflict with the wildlife.

Yet, the cattle production could be the better way for the farmer to integrate the market, especially because for example, the *Triangle Sugar Estate* is not able to supply their feedlots since the collapse of the commercial farms. However, the relationships between the stakeholders within the livestock sector are mainly on informal base. If the national statistics are available, the informations on the smallholders in resettlements and in the communities are lacking (demography, productivity, small scale economy,...).

The place of the wildlife in the national economy is till important, but the pressure of the surrounding areas (poaching, land pressure) is increasing especially because the drought and economy failure. So, the wildlife could be considered endangered in some places, notably because the potential positive interactions between the wildlife management and the livestock sector are not clearly negotiated.

The main needs for livestock farming development

Two reports from the Ministry of agriculture have stated some objectives for the livestock in term of strong development at the national level. For example for beef production:

- Increase the cattle numbers in the country by 2,100,000 with 5 years
- Increase the carcass weight from 160 to 230 kg over five years
- Increase the number of pedigree cattle from 4572 to 25000 over seven years by importation of exotic breed
- Improve the grazing lands over 80% of the land
- Decrease the age at first calving from 42-48 months to 36
- Increase the off-take rate from 7 to 15-20%

Similar trends are expected for dairy production, land management or veterinary actions. Those ambitious objectives will be difficult to achieve in the current context of the economy. Secondly, the main objectives are focused on the improvement of the animal productivity at individual level. In the Lowveld, it is obvious than similar expectations are proposed, but probably with higher climatic constraints than in the other regions of the country. However, it is obvious that the better way is not to improve individual performance, but to optimize the livestock farming system. According to the previous analysis in the Lowveld, the followings needs were listed:

1. A better knowledge of the type of communities and resettlers, of their production systems and of their dynamics by a monitoring of a representative sample of the livestock farming system;
2. A development of a feeding strategy based on the irrigation of pasture and on inventory of by-products from agro-industry (sugar cane, cotton);
3. An improvement of the knowledge on the market integration of smallholders, the cattle flow within the Lowveld area and the constraints in smallholder economy
4. A secured livestock farming system by specializing smallholders (animal providing for feedlot or dairy production) and by introducing a technical support from the integrated commercial partner (sugar factory, dairy factory)
5. A development of sustainable system of early destocking in case of drought or at the beginning of dry season in relationship with the feedlots or meat processors giving an adding value to the cattle production.
6. A better accessibility to veterinary drugs and inputs in order to improve the health status of the livestock

The classical requirements for livestock development include 3 topics, namely feeding improvement, better health protection and access to market (fig. 2). A good livestock farming system aims to propose well fed and healthy animals to a structured market.

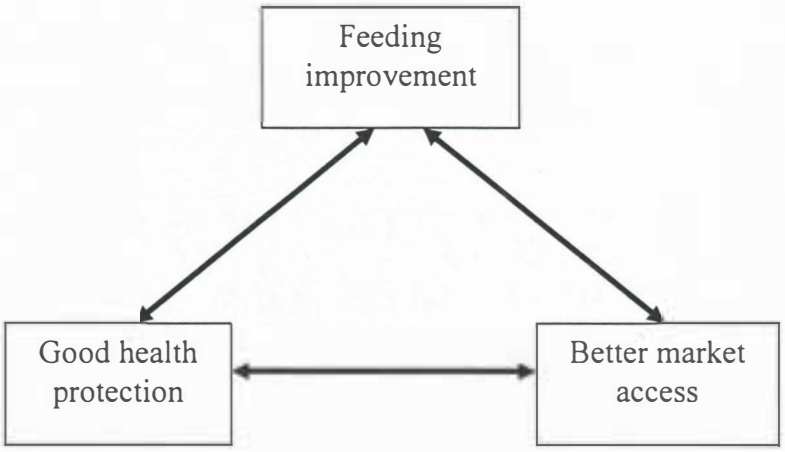

Figure 2. The classical triangle of the livestock development

This figure will be the base of the proposals (see annexe 5). However, the action plan must mainly included proposals aiming to develop a sustainable livestock system (i.e. to act on the interactions between these 3 components) rather to improve individual animal productivity. The recommendations will follow such trends.

Conclusion

In conclusion, the recommendations will include 5 types of actions into the three aspects described above. The 5 types of actions include studies (surveys to improve the knowledge of the current situation), equipment and infrastructure renovation, promotion of farmers' organizations, training and finally, introduction of new technologies. The action plan can be summarized under a cross table (Table 3)

	Veterinary aspects	Market aspects	Feeding aspects
Surveys	1. Epidemiological survey on main diseases on dipping tank	2. Demographic survey with 12-Mo software 3. Livestock commodity channel survey	4. Survey on farmers' feeding strategy and traditional knowledge management of the grazing area
Infrastructures	5. Rehabilitation of dipping tank	6. Rehabilitation of cattle market	7. Rehabilitation of wells and boreholes
Organizations	8. Farmers' association for providing veterinary drugs		
Training	9.Training farmers in dairy managing (feeding) and milk hygiene 10. Diffusion of risk factors manual on	11. Training farmers to backyard poultry management	12. Training farmers on feeding supplements using

	kid mortality		
New technologies	13. Promoting poultry and goat production	14. Inventory of the available by-products and market of by-products	15. Promoting forage production in irrigated areas

Table 3. Main action plan for livestock development in Lowveld

Those actions could be described in the recommendations as discussed in the TWG (see below)

Recommendations

(listed after livestock TWG meeting):

- 12-Mo survey at one-year interval to have a clear situation of the demographic parameters. It's includes:
  - Software delivery with users manual
  - Training of staff of AGRITEX
  - Support for data analysis
  - Report on main cattle demographic trends
  - Return results to farmers
- Survey on the cattle commodity channel in order to quantify the importance of current flow within and out the Chiredzi district
  - Questionnaire on cattle marketing aspect
  - Support from CIRAD-Montpellier for assessing the questionnaire and general methodology
  - Application to the different stakeholders of the livestock sector (producers, middlemen, butcheries, abattoir, distributors…)
  - Report on the importance of the cattle flow
  - Return results to livestock stakeholders
- Rehabilitation of the cattle market by giving facilities, viability administrative and market prices informations. But the problem of the money for transaction must be solved. Initiative pilot could be proposed at district council level. The providing feed-lots from Sugar companies is linked to this market rehabilitation, but agreements must be proposed between private sectors and communal areas (price guarantee, technical support)
- Promoting poultry and goat production
  - Training farmers to backyard poultry and Guinean fowl management (low input system)
  - Developing Newcastle vaccination to the backyard poultry by providing vaccines in the district (currently achieved)
  - Diffusion of risk factors manual on kid mortality (former ecopathological surveys achieved in Zimbabwe)
- Promoting dairy production system
  - Limited selection of key farmers closed to irrigated areas
  - Training those farmers in dairy managing (feeding), milk hygiene

- Promoting forage production in irrigated areas: land use plan in irrigation plots, adequation between expected milk production and land surface available.
- Introduction improved bulls with dairy purpose (the choice of the bulls must be discussed but dairy zebu breeds as Red Sindhi or Sahiwal must be preferred. Use of crossbred (Red Danish breed already expected) could be tested in pilot dairy project.
- Support for dairy plant implementation by private sector under Tongaat (sugar company)

- Improving the system of animal health protection
  - Assessment of dip tank requirements currently conducted (12 dip tanks already improving with veterinary services)
  - Rehabilitation occurring already in some cases
  - Revival or developing farmers association structures for vet drug supplying at animal health center level (in cooperation with private sector)
- Rehabilitation of wells and boreholes in arid areas after identification of the sensitive points in the livestock survey. Development of appropriate technology system for cattle watering proposed.
- Improving the animal feeding
  - Inventory of the available by-products and market of those by-products (molasse, baggasse, cane tops, urea, cotton cake, sunflower, "chibuku",…)
  - Enforcement of rules for Mopane protection and make study on traditional use (linked to the management of the grazing area)
  - Making a survey on the traditional knowledge of livestock feeding system
  - Training farmers on feeding supplements using
  - Assessing the effect of increased livestock population on grazing land

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Organism	Name	occupation
PARSEL project	Gwiny Muti	local coordinator
FAO /DSV	Chenjerzi Njagu	Consultant animal health
FAO	Elma Sikala	Consultant animal health
RUAT	Rob Cunliffe	Consultant
CIRAD	Sebastien Lebel	manager of PARSEL project
CIRAD	Michel De Garine	Scientist-epidemiologist
CIRAD	Alexandre Caron	Scientist-epidemiologist
CIRAD	Bruno Lidon	Irrigation expert
AGRITEX	M. Porpushaï	Director
AGRITEX	Siziba Stanslas	Animal production officer
AGRITEX	Dr J. Makwangudze	Veterinary officer
Chiredzi Rural district council	Abraham Sitolé	Parlementarian
Chiredzi Rural district council	Andrew Ndebele	Chairman
Chiredzi Rural district council	Caiphas Chudu	Extension service
Tongaat Estate	Patrick Muromo	Livestock manager

ANNEXES

1. **Calendar and encountered personalities**
2. **TOR of the mission**
3. **Fac-simile of the 12-Mo manual (LASER package)**
4. **Project sites**
5. **Powerpoint presented at the livestock thematic working group for discussion**

1. Calendar and encountered personalities

Thursday 20 November	Departure from Montpellier at 13:40
Friday 21 November	Arrival to Harare at 15 :00 First meeting with S. Lebel and D. Dulieu
Saturday 22 November	Reading of the project documents Meeting with Mrs M. Baherle (ex. Cooperation adviser at SCAC-French Embassy)
Sunday 23 November	Reading documents, mission organisation Meeting with S. Lebel
Monday 24 November	Meeting with Gwiny Muti, local coordinator of the PARSEL project Meeting with Dr Chenjerzi Njagu and Elma Sikala (FAO, Animal health sector) Meeting with M. De Garine and A.Caron Arrival of Mr B. Lidon (irrigation expert-CIRAD) Meeting with Rob Cunliffe, RUAT expert
Tuesday 25 November	Departure for Chiredzi
Wednesday 26 November	Meeting at PARSEL office with Abraham Sitolé (parliamentarian in charge of the project area) et M. Porpushaï (director of Agritex) Meeting at Vet office with Siziba Stanslas (head of animal production office) and Dr J. Makwangudze (head of veterinary office at Chiredzi) Field visit (dipping tanks and irrigation schemes)
Thursday 27 November	Meeting with Chiredzi rural district council (Mrs A. Sitole, A. Ndebele and Caiphas Chudu) Field visit at Gudo (irrigation scheme)
Friday 28 November	Meeting of the thematic working group on livestock Visit of the Tongaat sugar cane farming (cattle and sheep farming) with Patrick Muromo (livestock manager)
Saturday 29 November	Return to Harare Departure for Montpellier via Addis-Abeba
Sunday 30 November	Arrival to Montpellier

2. Term of reference of the mission

TERMS OF REFERENCE

Public-Private-Community Partnerships to Improve Food Security and Livelihoods in the Southeast Lowveld and Mid-Zambezi Valley" (Ref Food/2007/137-950)

Overview Summary:
In fulfilling this contract, in summary, your duties and responsibilities will in line with:

- Adding value
- New options
- Technical solutions to be tested
- Institutional set up
- Model of partnership
- Links to market

Background:
This initiative is part of the EU-funded project entitled "*Public-Private-Community Partnerships to Improve Food Security and Livelihoods in the Southeast Lowveld and Mid-Zambezi Valley*". This component of that project will address food security through livestock production.

Methodology:

- ***Step 1: Study of background documents in Montpellier.***
- ***Step 2: Initial briefing with the Project Manager, FAO and Department of Veterinary Services in Harare.***
- ***Step 2: Working session with the Coordination unit & Local experts in Chiredzi (Livestock working group).***
- ***Step 3: Field visits of the four targeted Wards 1, 2, 3 & 4.***
- ***Step 4: Working sessions with South East Lowveld private sector and government bodies (Agritex, Tongat, RDC) involved in livestock production.***
- ***Step 5: Drafting Report***
- ***Step 6: Debriefing workshop in Chiredzi with the Livestock working group.***

Report-writing notes:
In addition to being a project document, the report should be structured as follows:

Executive Summary: This should be comprised of brief bullet points that highlight the major findings of the study.
Introduction: A brief introduction based on the terms of reference of the study.
Methodology: A brief description of the methods used during the survey.
Results: In this section, it is advised that subheadings be used to describe the different aspects of the study.
Discussion: Discuss the findings of this study.
Conclusion: Make concluding statements in line with the findings of the study.
Recommendations: Make recommendations in line with the findings of the study
References: Cite any references used in the report. Follow the citation guidelines in the Style Manual.
Acknowledgements: List all who assisted with the study.

Key elements of the study are:

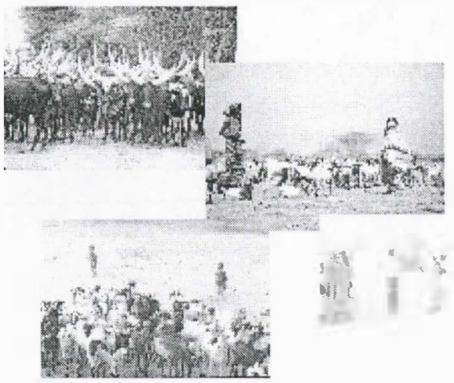
- To review the draft report of Agritex on the livestock status in Chiredzi RDC.
- To review the Resource Use Assessment Report and extract key information about local strategies for livestock production.
- To visit each of the four targeted ward selected for pilot livestock development initiatives with Agritex & DVS local coordinators.
- To explore the role of the private sector.
- To identify transformational strategies for holistic livestock production: market based livestock production linked to traditional systems.
- To identified training needs
- To propose guideline for an operational analysis of the production systems at District level (characterize production systems)
- To pave way on the setting up of a monitoring systems based on indicators

3. Fac-simile of the 12-Mo manual for users

12mo

A retrospective method for estimating demographic parameters in tropical ruminant livestock population

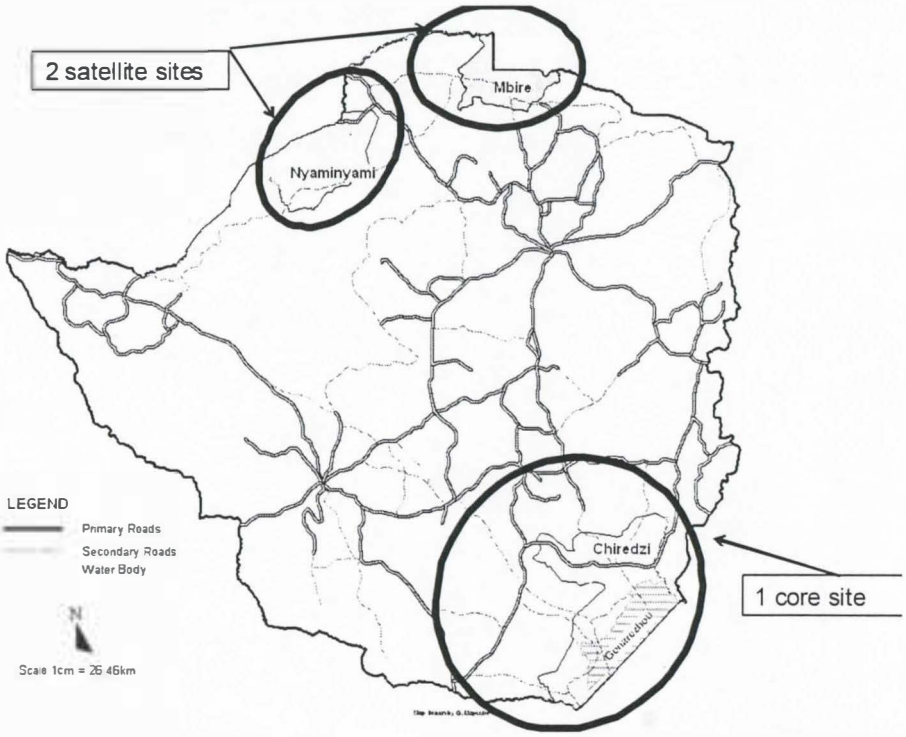
Version 3.1



Lesnoff, M., Saley, M., Adamou, K., N'Djafa Ouaga, H.,
Ayantunde, A., Gerard, B.

CIRAD ILRI AGRHYMET

4. Main project sites



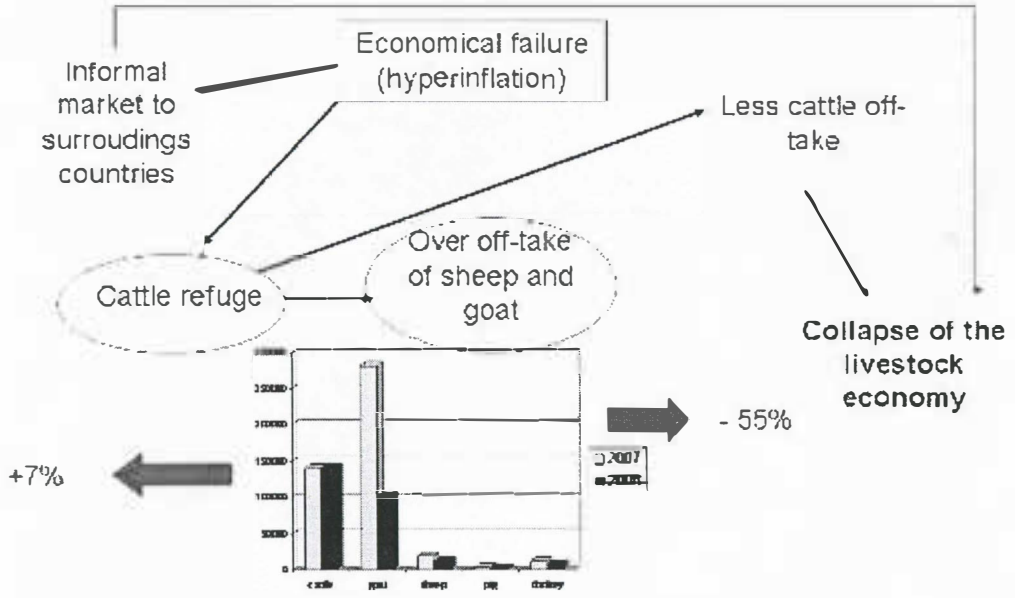
5. Powerpoint presented at the livestock thematic working group for discussion

PARSEL

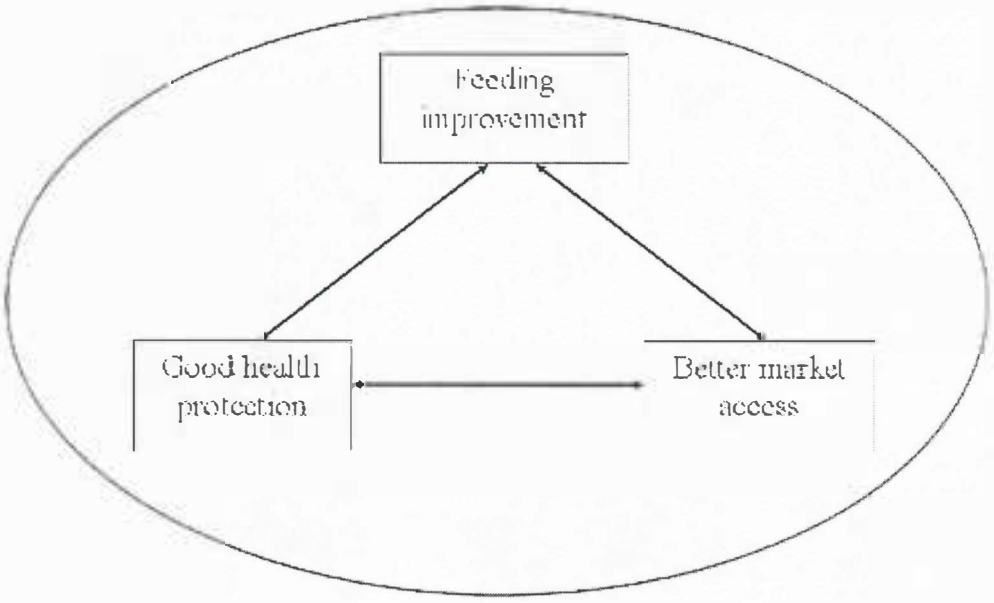
PARSEL-EU project

Livestock TWG

The current situation of livestock sector



Action plan on the interactions rather than on the animal productivity



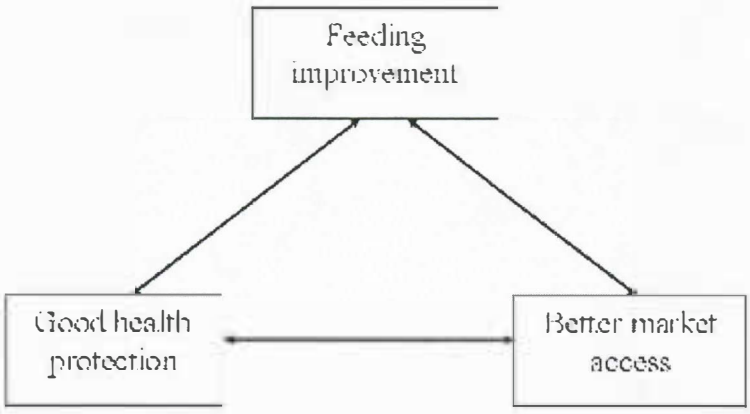
The current situation of livestock sector

Area	Cattle	Goat	Sheep	Pig	Poultry	Donkey
Communal	9.6	7.6	0.8	0.3	0.2	0.6
Sc commercial	72.3	36	8.4	0	119	2.8
Resettlements	13.7	6.2	5.1	0.1	0	0.5
New resettlements	11.3	6.0	0.5	0.1	0	0.6
TOTAL	**10.7**	**7.2**	**0.8**	**0.2**	**1.3**	**0.6**

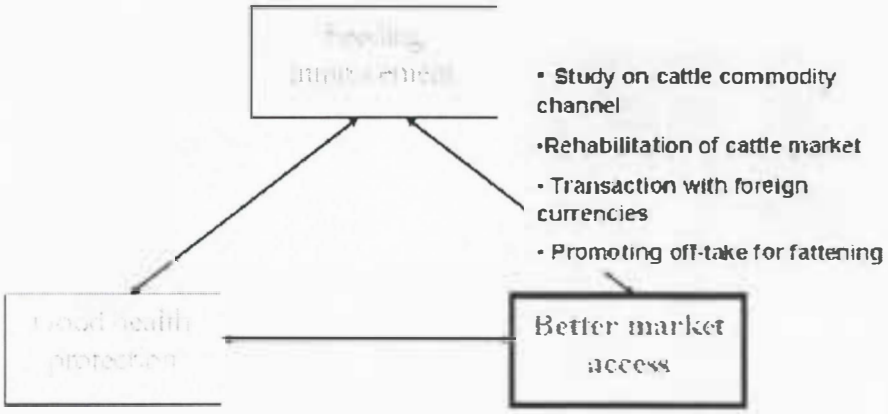
The current situation of livestock sector

- The total Tropical Livestock Unit in Chiredzi district is around 200,000 TLU approximatively, i.e, 8.5 ha/TLU at the district level or 6.4 ha/TLU if only rural lands are involved (67% of the district superficie).
- 4.7 ha/TLU in communal lands
- 8.3 ha/TLU in settlements
- 26.4 ha/TLU in small scale commercial sector

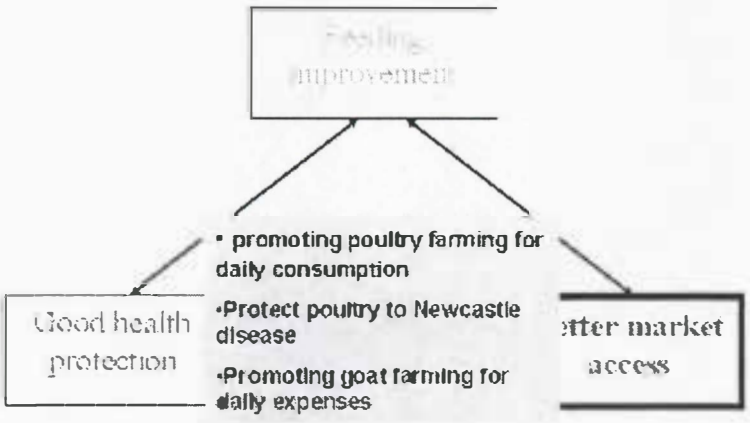
The three poles of the livestock development



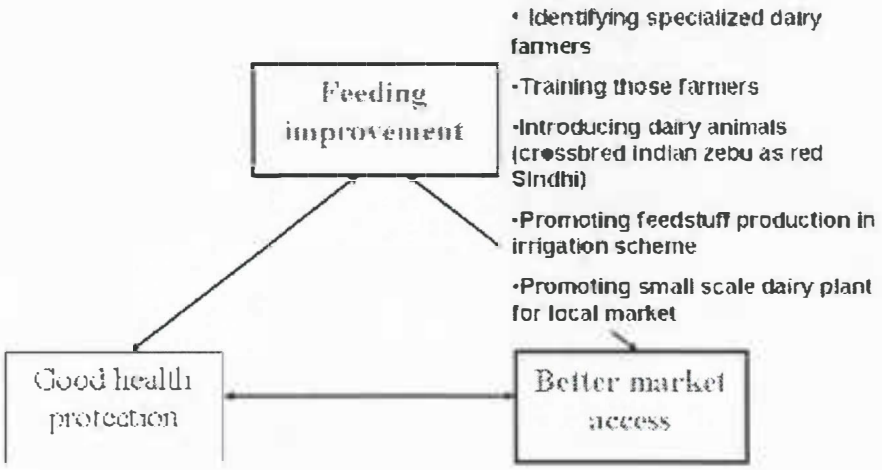
Market improvement



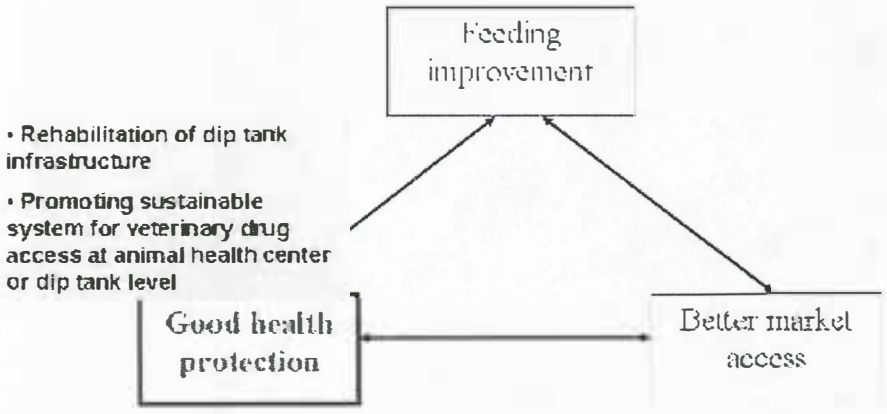
Market/livestock interactions



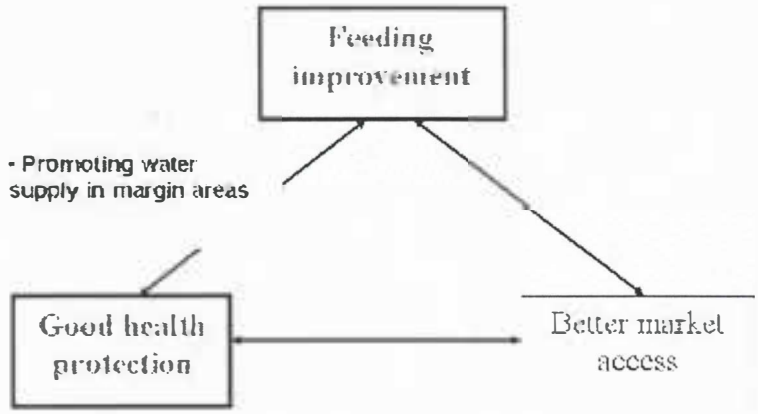
Interaction feeding/market



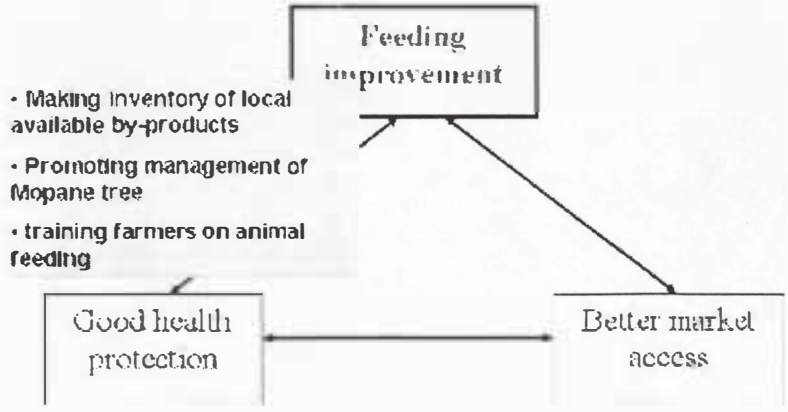
Health protection



Interactions feeding/health



Feeding improvement



Thanks for attention